

## CLAIMS

1. A reciprocating compressor comprising:
- a hermetic container; and
- 5 a compressing element accommodated in the hermetic container and compressing refrigerant gas, the compressing element including:
- a crankshaft disposed generally in perpendicular direction and having a main shaft and an eccentric section;
- a block forming a cylindrical cylinder;
- 10 a piston reciprocating in the cylinder;
- a connecting rod connecting the eccentric section to the piston;
- and
- a balancing weight for balancing vibrations produced by structural parts of the compressing element, wherein the structural parts
- 15 include at least one of the piston, the connecting rod and the eccentric section, wherein the cylinder is disposed offset such that an axis line of the cylinder and an axis line of the main shaft do not cross each other,
- wherein a center of gravity of the balancing weight is placed substantially opposite to a center of the eccentric section with respect to the
- 20 axis line of the main shaft and deviated along a rotating direction of the main shaft from a place just opposite to the center of the eccentric section.
2. The reciprocating compressor of claim 1, wherein when the piston is at a top dead center, the center of gravity of the balancing weight is placed not
- 25 to be over a plane including the axis line of the main shaft and being in parallel with the axis line of the cylinder.

3. The reciprocating compressor of claim 1, wherein the refrigerant gas is called R600a.

4. The reciprocating compressor of claim 1, wherein the crankshaft is  
5 driven by an inverter which operates at a frequency not greater than a commercial power frequency.